MYRMECIA

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NOTICE

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COPY DEADLINE FOR NEXT ISSUE

Material for publication in our May 2002 issue should be in the hands of the Editor before **Friday 12 April 2002**.

Copy is requested as .rtf e-mail attachments at: laurence@csiro.au

EDITORIAL

Ocker I will never be, but henceforth let no one suggest that any problems with *Myrmecia* arise from having a "Pom" as editor. Having published some 70 books and papers on Australian insects, and described 170 Australian thrips as new, I concluded it was time to declare my political allegiance – and was duly issued with my certificate of Australian Citizenship on 30.xi.2001. I am not sure if this gives me licence to try to be yet more provocative, or if I am now expected to sink into ineffectual rectitude. Provocation has provided the benefit that, at long last, we can offer readers a Letters to the Editor section. Two of these letters are from AES Foundation Members, and the third from our Chief Editor – and an interesting range of opinions is involved. I hope that other Members will feel that *Myrmecia* is a suitable outlet for their views on matters that concern entomology and AES. Indeed, the picture of a biting fly on our cover carries two messages – any publication needs some bite to be successful, and no group of insects is of greater importance to the community than biting flies. I assure readers that our non-biting male was not intentionally symbolic!

This is the first issue of *Myrmecia* to be distributed electronically. Our Executive is arranging to send it as a compressed .pdf file to all student members, as well as to those of you who have opted not to receive hard copies. My original .pdf files have high quality images, far better than the printed versions, but the smaller file that is distributed is likely to involve some pixellation of these images, as you will find if you attempt to print your own copies. As our Treasure indicates in his report below, *Myrmecia* will no longer be sent to institutional libraries subscribing to *AJE* through *Blackwell*; 60 students will receive *Myrmecia* only as a .pdf, and 76 Members have chosen to take *Myrmecia* that way. As a result our print run will be reduced from 950 to 750, thus reducing our printing bill from about 1950 dollars a quarter to about 1750. This financial saving to the Society will involve increased work for the Executive who e-mail the .pdf copies, and presumably increased costs to the employers of those Members who read or print out copies in their working hours! Personally, I remain convinced that if we feel our Society is

worth keeping then we should support, maintainand promote it at our own expense rather than transfer expenses to the public purse – but then, I remain a thatcherite, albeit with a a small "t".

This brings me back to the question of what you, the Members, want from your **News Bulletin**. Do you, as Neil Heather suggests, want four pages of news that will inevitably comprise mainly formal Executive business? Or do you want a forum in which to exchange news and views informally, to keep you in touch with each other across this vast continent and wide array of entomological activities? Until I hear further from more of you, or you attend the next AGM and make a formal proposal, I will continue to be proactive and, with the active support of like-minded Members and (most of) our Councillors, *Myrmecia* will try to offer you an interesting diet of information about entomological activities across Australia. Amongst various general articles, therefore, this issue includes a review of recent mosquito problems from the far north, whilst from the sunny (and smoky) south you will find some comments on biodiversity and on how biodiversity research is (or is not) funded, as well as comments on the delights of life in quarantine

First, however, we have an announcement that saddens many of us. The death of **Ken Key** not only brings the loss of an outstanding entomologist, it marks the progressive closing of an era. Ken recognised that our own species has an obligation to develop some understanding of the many other species with which we share this planet, both for practical reasons and for those many aesthetic and intellectual reasons that mark us off as being a different species with broader responsibilities. Such humanitarian views have less political influence in these narrowly monetarist times.

LAM

Kenneth Hedley Lewis Key

28 August 1911 - 11 January 2002

Members of the Society will be saddened to learn of the death of Ken Key. Born in South Africa, Ken joined CSIR in 1936 to investigate Australia's locust problems. He was instrumental in setting up the Australian National Insect Collection, and in 1959 became its first and only Curator, subsequently in 1968 becoming Chief Curator. Retiring from the Division of Entomology in August 1976 he became an Honorary Fellow and continued his studies on Australian Grasshoppers until ill health caused his second retirement in 1996. A full obituary will appear in the next issue of Myrmecia.

Murray UPTON

LETTERS to the EDITOR

Myrmecia too large?

I would strongly support an electronic alternative to the hard copy of Myrmecia. It is about time that AES had its own upfront website such as that of the Entomological Society of America www.entsoc.org or of The Royal Entomological Society www.royensoc.demon.uk. Generosity of the NSWDA aside, we do not look like the voice of Entomology in Australia. There would be many major benefits, especially economic.

However mailed *Myrmecia* is the main contact of most members of the Society and for many, together with the Journal, all we see for our money in most years. AGM's really require a sponsor to enable attendance when registration, travel and accommodation are taken into account. They are beyond the reach of a significant proportion of our members.

Myrmecia could be reduced in size (and cost) by omitting most of the personal trivia from regions. On this basis we could be well served by a monocolour folded A3 sheet giving 4 sides of A4 or at most 8 sides 4 times a year. This type of Newsletter is widely used and can be produced very economically while at the same time being web friendly.

Neil HEATHER

Myrmecia too small?

I believe that the members attending the AGM at Manly, who decided on ways that "would reduce the cost of producing *Myrmecia*", have done the Society a great disservice. Before making this decision they should have first, as the Editor suggested (*Myrmecia* 37, Part 4.), considered the costs likely to be associated with a shorter print run and the complications involved in having two distribution lists. Furthermore, they should also have realised the effect on our membership of offering students only a web version. By all means have a Society Website but not an electronic *Myrmecia*. These decisions are, to my mind, in direct contradiction to the Vice President's comment that there was a need for the Society to grow and develop.

If our Society is to grow and develop two things are required. *Myrmecia* should be improved and upgraded and the Executive should cease its continual moving from State to State and become more permanently based.

Myrmecia should be a forum for members, both amateur and professional, to raise and discuss

matters of interest, and for the Executive to comment and express opinions on both government and non-government policies and actions affecting entomologists. It should become recognised as the main voice of Entomological Science. To do this it must remain a hard copy publication and on no account become web-based to the extent that we disenfranchise the very people we hope to conscript to our membership in their later years.

To my knowledge there is rarely if ever any mention in *Myrmecia*'s pages of the activities of the large body of amateur entomologists that exist throughout Australia. If we want to increase our membership we should be looking at ways in which these people can not only be encouraged to join the Society but become actively involved in it.

The regular, complete changes of the Executive and their move from State to State may have been satisfactory when we first set up the Society but I now feel that this matter should be revisited. It is high time the Society settled down on a more permanent basis in one place with the final objective of perhaps having rooms and a secretariat of some kind. This would allow some continuity, and obviate matters raised with the Executive disappearing into a black hole each time they change venue. A matter that certainly does not help maintain a satisfied membership.

It would be interesting to know why it was decided to look at reducing the cost of *Myrmecia* rather than the editorial costs of the Journal, particularly when the former only costs $6 out of our membership. Some cost cutting and a little more efficiency with the Journal would almost certainly save more.

Murray S. UPTON

Myrmecia incorrect?

The editorial in the last issue of *Myrmecia* raises a number of challenges to the Society in how it perceives and runs the *Australian Journal of Entomology*. Far from being the luddites suggested by that editorial, the journal has made significant changes, particularly in the way it handles submissions and refereeing.

The journal firmly encourages electronic submissions. For a long time we have asked for a disc copy of the manuscript on submission, but many authors have apparently not read or heeded this request - including some who complain of 'poor' service! An electronic version can be quickly sent to referees, particularly those overseas. Email reply is encouraged and the comments can be quickly sent to the authors. An electronic copy of the final manuscript and figures is mandatory and allows easy copy-editing and submission to the printers. Proofs are now sent to authors by email as pdf files.

However, the process is still constrained by the cooperation of referees. We appreciate that all referees are busy people, but it is amazing how many referees simply ignore all requests for a report or even an indication of whether they are willing to do a report. As I've said before, we know that they are still alive!

Manuscripts should preferably be emailed as attached Word files to me at pallsopp@bses.org.au. Alternatively, a printed manuscript *plus a matching disk version* can be mailed to me. All figures should be embedded as objects in the Word file for submission; high-resolution (eps or tif; 300 dpi) files will be requested after acceptance. These must be separated from the accepted text file. Large, that is more than 4 Mb, attachments may not transmit successfully and may have to be divided and sent in more than one email.

The *Myrmecia* editorial also rails against the requirement for authors names to follow the first mention of an organism. Yes, we require this for animals, but, not as the editorial suggests, for plants. In this we follow Recommendation 51A of the *International Code of Zoological Nomenclature*, believing that in a few words it gives that extra little piece of information that links the present with the past and eliminates any confusion. And, yes, when a species name is combined with a generic name other than the original one, the name of the author is enclosed in parentheses (Article 51.3 of the *Code*).

There are journals that now publish papers on the web shortly after each paper is accepted. They distribute hard copies of these (necessary to conform to the *Code*) as individual parts rather than the traditional mode of grouping a number of papers into only a few parts each year (4 in the case of *Australian Journal of Entomology*). Distribution of the more than 50 'parts' that we would publish each year to all members and subscribers would be cost prohibitive. Only if the majority took the journal electronically (and *AJE* is presently available on the web through Blackwell Synergy) would this be useful. Here is a real debate for the Society - perhaps the acceptance and success of an electronic *Myrmecia* will give us an indication.

Peter ALLSOPP
Chief Editor

QUARANTINE NEWS

Many members of the AES are involved in quarantine – the protection of Australia's plant production from invading organisms. **Glynn Maynard** writes here of diversity and emergency in her daily life, **Tony Postle** about his short break from the front line, and **Kylie Anderson** about routine work on our northern frontier.

The daily grind

What does a QUENTO (an Operational Quarantine Entomologist) actually do? - I was asked recently. As we all have relatively vague notions of what other entomologists do as a daily grind, I drew up these few notes to give *Myrmecia* readers some flavour of daily life on the front line of AQIS (Australian Quarantine and Inspection Service). Qentos have to be 'out there' kind of people, which is a bit of a oxymoron when you realise that fundamentally they are diversified taxonomists. That is, they are systematists who have a broad range of other entomological skills together with a huge amount of liaison, negotiation and management skills. There is no really typical day, and the senior entomologists must be contactable twenty-four hours a day (since cargo and passengers don't stop moving across the international border at 4.51 pm). We spend our days on the front line with quarantine inspectors and clients doing "entomology", anything from identifying insects to inspecting premises and ensuring they meet specified guidelines. If it moves and is spineless we deal with it, also sometimes cold-blooded things with spines; so insects, snails and the occasional snake or gecko come across our desks Any day could see us knee deep in fish meal in a ship's hold – then half an hour later sitting in a board room meeting with stakeholders, hoping like hell that the room is big enough for your newly acquired aroma not to offend too many people. We undertake an astounding array of jobs, as well as the frontline activities (being at the pointy end of quarantine as it is often said) where we need the courage to rapidly make the best decision based on available information. We also create and undertake training packages for staff, input into parameters that set up quarantine policy, run stakeholder meetings, and give talks to industry and stakeholders. One thing that can be said about life as a Qento – it is never boring.

The emergency treatment

At the Melbourne docks in early January, as part of a routine inspection for Giant African Snails, a container from Lae, New Guinea was found to include a nest of live bees, this being just one of 160 containers discharged by a single ship. Moved to a container park as part of a routine inspection of all containers out of Lae, the vast majority of the containers were inspected by an AQIS officer within a few hours. On one of the last containers to be looked at a nest of bees was found, and the inspector called the AQIS entomologist. The nest consisted of 6 combs and about 400 bees. The first five combs (and their bees) were cut away and dropped into a zip-lock plastic bag. The remaining bees were clustered in the corner of the container off the remaining comb. The container was not moved, to reduce any risk of the bees absconding, nor was any spray applied. A beekeeper was called, who netted the bees and captured the queen, and the bees were then sprayed. Finally, shortly after lunch the container was sent for steam cleaning, and the beekeepers coveralls and outer vests of the entomologists were either heat treated or frozen to ensure that there was no opportunity for transfer of any mites present to local bees. Subsequently the bees were confirmed to be *Apis cerana* (java type), and to be infested with the mites *Varroa jacobsoni* (java type) that do not infect European honey bees.

The busman's holiday

A quarantine officer is always learning, and in this spirit Tony Postle (Northern Australian Quarantine Strategy) from Broome joined **Kate Sparkes** (Australian Quarantine Inspection Service) from Melbourne to learn more about the arcane world of pest thrips from Laurence Mound for a week in December. Kate is primarily involved with potential pest invasions from the more temperate parts of the world, and spent time looking at some of the extensive collections of pest thrips in ANIC that have come from many parts of the northern hemisphere. In contrast, Tony is expected to deal with the rich but little known insect fauna of the Oriental tropics that arrives on Australia's northern borders. Among the dozens of specimens collected on quarantine surveys throughout the Kimberley were not only several undescribed species, but two potential pests in Asian genera not previously known from Australia. Litter samples from the south west of the State yielded further undescribed thrips taxa. All-in-all an educational experience for everyone. Following the thrips week, Tony joined **Kylie Anderson** of NAQS, Mareeba (and many others) on the CSIRO Entomology beetle identification course. Particularly well organised, this course presented participants with a

comprehensive range of larval and adult beetles from Australia, PNG and New Zealand. Whilst not considering themselves experts, all three quarantine officers returned home far more confident of their ability to recognise more of the insect species that interception and survey duties bring to them.

The northern frontier

Welcome to the Torres Straits, a multi-cultural, unique society that, at last census, heralded a population of 8,679 inhabitants. The Torres Strait is the body of water between Australia and Papua New Guinea where the Indian and Pacific Oceans meet. In this area, there are a total of 133 islands – coral cays, rocky outcrops, continental islands, mud, basalt – 20 of which are inhabited. The Torres Strait can be divided into five main island groups, being the Top Western Islands (Boigu, Saibai and Dauan), the Western Group (Badu, Mabuiag and Moa), the Central Group (Yam, Sue, Coconut and Yorke), the Easterns (Murray, Darnley, and Stephen islands), and finally the TI Group (Thursday, Horn, Hammond, Prince of Wales, Friday and Goodes Islands). In late February 2001, the NAQS plant health team visited a selection of these islands.

Saibai, Dauan, Darnley, Yorke, Yam and Thursday Island gardens were inspected, and the uninhabited islands of Tudu, Gabba and Deliverance were visited. On each of these islands, the entomological focus was on the detection of exotic insect pests at/on or in their known hosts (or native relatives). Saibai and Dauan islands are visited bi-annually due to their proximity to the coast of New Guinea – Saibai is only 5kms from the easily visible PNG coast. Deliverance and Gabba islands are also visited regularly due, in part, to their 'sentinel' bee status. Deliverance is the most western lying island in the Straits, and one of the most likely places for *Apis cerana* (Asian Honey bee) to turn up from Indonesia. Gabba lies between the top western group, where *A. cerana* is established, and the western and central groups, and is the next logical place for *A. cerana* to appear.

As a matter of courtesy, the first initiative before visiting an island is to write to the Island Council approximately one month before the visit, to obtain permission to survey. When first landed on the island, the team visits the Community Council office, which serves to confirm the teams permission to survey, and to learn of any sensitivities that may be pertinent on the island at that time.

The first island visited during this survey was Saibai Island. Upon arrival, Quarantine Officer Roy Babia met the team and acted as escort around the island. Five green tree frogs had taken up residence in one of the bee boxes, that were originally installed as monitoring tools for *A. cerana*. Dauan Island, one of the granitic continental islands, was visited immediately after Saibai. *A. cerana* was collected at *Tridax procumbans* and *Cocos nucifera* flowers and, upon return to the Mareeba laboratory, sent for tracheal mite dissection, results of which were negative. On both of these islands, green tree ants were extremely active and aggressive, although the bites seemed to become less noticeable as the day wore on.

The next day, the team choppered (courtesy of the Coastwatch helicopter) in to Darnley Island, a highly disturbed basaltic island. Quarantine Officer Walter Lui accompanied the team to various sites. Approximately twenty mango fruit were examined for *Deanolis sublimbalis* (Red banded mango caterpillar), of which none were detected. Poor Walter was bitten by *Odontomachus*, which is the local version of the 'fire ant', as it delivers an extremely vicious and painful sting. Imagine, 31°C, 75% relative humidity and a throbbing hand to boot! Fruit fly hosts *Diplocyclos palmatus, Capparis lucida* and *Cucurbita moschata* fruit were examined for exotic non lure-responsive tephritid larvae. None were detected.

Yorke and Yam Islands were visited during the next day. Hilda Mosby, Quarantine Officer on Yorke Island, was at the airstrip on her quad-bike, waiting for the chopper to land. She informed the team that employees at the nursery were aware that the red imported fire ant had been detected on the Australian mainland, and were keen to learn more about it.

Later that same day, the team choppered to Yam Island, and were met by Q-Officer Clayford Lui. Clayford was keen for the scientists to give an informal presentation to the Grade 2'ers at the local primary school. Island children are extremely aware of the pertinent quarantine risks, and were able to ask many well-informed questions, as were their teachers. The kids were shown how to look for red banded mango caterpillar in mango fruit, and promises of posters with pictures of this pest were well received. On the pest front, *Aleurodicus dispersus* (Spiraling whitefly) was exhibiting good rates of wasp parasitism on both Yorke and Yam islands. *Aleurodicus dispersus* first appeared in the Torres Straits in early 1991, and a year later, due to the effort of NAQS staff, *Encarsia* sp. was introduced from a culture in Fiji to control the pest and hopefully reduce its spread south. In 1998, however, the pest was detected in Cairns.

A day spent surveying Thursday Island revealed

no unusual insect pest problems, but the local elaterids were having an orgiastic bump-supper on the grasses *Heteropogon*, *Bothriochloa* and *Cenchrus*!

The next day, the team visited Gabba and Tudu islands. During the helicopter flight to Gabba, the weather and water below was especially clear (in marked contrast to the authors last visit, when it rained non-stop for seven days!), and allowed for a marine life survey. Eleven dugong, one ray, 12 turtles and one sea snake were sighted. On Gabba, various bees and chrysomelids were collected. It must have been the season, because the weevil *Oribius,* like the TI clickies, were congregating *en masse* on *Cenchrus* flower spikes! The ride to Tudu from Gabba lasted just over 15 minutes. Tudu, a densely vegetated coral cay, is not permanently inhabited, but family groups use temporary dwellings as fishing camps. A vigorous pumpkin vine with developing fruits was inspected for fruit fly larvae.

The chopper trip from the Thursday Island heliport to Deliverance Island took just under one hour next day. Again, the weather was clear, and six seasnakes, 101 turtles, four sharks and two rays were seen. Upon arrival on Deliverance, the fruit fly traps were cleared and the lures replenished, and time permitted a bi-pedal circumnavigation of the island. Many turtles were waiting just offshore to lay eggs on the beach. The most visible beetle by far on the island was the flower scarab, *Ischiopsopha wallasiana*, which was extremely common at *Premna serratifolia* flowers. Native bees were swept from the *Premna*, and interesting mealybugs were collected on *Hibiscus tiliaceus* leaves. There were no signs of *Apis cerana* in the bee boxes.

In conclusion, a total of 58 entomological specimens were collected during the seven days of surveying, and no exotic insect pests were detected.

BIODIVERSITY ISSUES

Press Release

David Yeates of CSIRO issued a press release in January concerning our knowledge of Australia's arthropods. "It's like trying to run a business without knowing what stock you have," he was quoted as saying. The first estimate of Australia's insect fauna, made early last century, predicted a total of 37,000 species. Over the past 250 years we've managed to formally describe and name around 60,000 species. Now we think there may be 250,000, twice the figure given in a 1980s estimate. As custodians of our biological heritage, we have an obligation to future generations to understand and preserve our fauna and flora. We may be losing economically important species before we realise what role they play in maintaining our environment. Because we don't yet have a complete inventory of our biodiversity, we can only measure human impacts indirectly. The Director of ABRS, Ian Cresswell, commented. "The pace of discovery needs to accelerate if we are to have the necessary information to help conserve biodiversity. We need to fast-track the discovery and documentation process to outpace the rate of extinction". David Yeates pointed out that as little as $6M per annum for the next 45 years would fund 20 scientists plus technicians to describe the remaining 180,000 unnamed species, and suggested that this was a small outlay in terms of the benefits to society, sustainability and the economy.

ABRS support for Invertebrate Studies

The Australian Biological Resources Study (ABRS) has undergone significant changes over the last several years, reflecting Commonwealth Government policy to put more emphasis on electronic delivery of data through the Web and on CD-ROM. A new ABRS identification series has been introduced to promote electronic identification tools for all elements of Australia's fauna, fungi and flora, and increased emphasis has been given to lesser-known groups of organisms.

ABRS continues to support taxonomic research on Australian biota through the Participatory (Grants) Program, but now expects timely delivery of 'products' that are useful to the scientific and general community. These products may be made available as traditional papers, monographs and conventional keys, as well as interactive keys (CD ROM or Internet) and non-technical guides. As always the Program remains a competitive, peer-reviewed process, and funds are never adequate to satisfy all proposed studies. The following table gives an indication of how grant applications to ABRS for work on invertebrates fared in 2001.

Applications in 2001	$$ requested
70 New	$2,715,461
20 Renewals	$728,243
Total requested	**$3,443,704**
Total funded	**$876,250**

Applications in 2002-3	
59 New	$2,314,887
13 Renewals	$218,312
Total requested	**$2,533,199**

AES Members might care to note that in 2001 ABRS was able to provide approximately 25% of the total sum requested for work on Invertebrates, including insects, and the total amount available for 2002-3 is unlikely to rise significantly. To support all Flora, Fungi and Fauna studies for 2002-3, the total sum requested from ABRS Participatory Program exceeds 6.25 million dollars, with approximately 1.8 million dollars available.

Alice WELLS
ABRS Invertebrates Subprogram

EXOTIC *Aedes* IN DARWIN

Both the Territory Medical Entomology Branch and AQIS have programs to detect and eliminate exotic mosquitoes imported into Darwin. AQIS searches all overseas vessels and cargo for exotic mosquitoes, including the area within 400 m of a port. The MEB programs are within port areas, in nearby suburban and industrial areas, as well as in other vulnerable sites for importation or establishment throughout Darwin. Both AQIS and MEB operate ovitraps continuously in the Darwin Port area, these being checked regularly for eggs and larvae, and the eggs reared for identification. The NT is free of the two principal vectors of the human arbovirus disease dengue, although there have been numerous instances of both *Aedes aegypti* and *Aedes albopictus* imported into Darwin. Each importation has been detected and eliminated quickly, most being associated with cargo of overseas vessels. Only twice since 1978 had exotic *Aedes* eggs or larvae been detected in on-shore ovitraps, but a recent detection highlights the continuing risk of exotic mosquitoes to Australia.

In June 2001 AQIS submitted to the MEB some *Aedes* mosquito larvae reared from a trap in the Fort Hill wharf area of Darwin. The larvae were at an earlier growth stage than normally required for positive identification and differed in one key character from published descriptions. The species was probably *Aedes scutellaris,* an exotic New Guinea and Torres Strait species, or possibly *Ae. albopictus,* an exotic to Australia and potential vector of dengue and other arboviruses.

Surveys and precautionary elimination measures were implemented to ensure the importation was eliminated. A Quarantine hold was placed over movement of all potential water holding receptacles in the wharf area, such as tyres. A search for larvae in such receptacles, and fogging against adult mosquitoes, was carried out at once, but only larvae of native species were found. Despite additional carbon dioxide-baited light traps, also additional ovitraps, within and outside the port area no further exotic *Aedes* were detected.

It seems possible that the larvae were associated with a small population of mosquitoes that had bred in water pooling in a canvas tarpaulin on board a Papuan vessel moored at Darwin about three weeks prior to the detection. The identity of the larvae remains unclear, and the identification remains as *Ae.* ?*scutellaris*. There is a possibility that they represent *Ae. albopictus,* or another of the *Ae. scutellaris* group such as *Ae. malayensis, Ae. katherinensis*, *Ae. alorensis,* or even an undescribed species. Adults are required for a full determination, but this is the second record of *Ae.* ?*scutellaris* imported into Darwin, the previous record being in May 2000, in vehicle tyres on a vessel from Jakarta. This is the third ovitrap record of exotic mosquitoes in Darwin, the previous ones being *Ae. albopictus* in 1989 and *Ae. aegypti* in 2000. The last importation of *Ae. albopictus* occurred in Darwin in January 2001 from a vessel that had recently arrived from Dili, East Timor.

This interception is evidence that the ovitrap surveillance procedures to detect exotic mosquitoes are working well in Darwin. It was recommended that quarantine procedures be modified to collect larvae or pupae alive from receptacles on vessels arriving from Timor, and that the larvae and pupae be link-reared to adults to confirm identification. Vessel and cargo inspections continue to detect importations, and this allows timely eradication procedures. This detection and eradication contrasts with instances in other parts of the world where exotic *Aedes* species have become established and spread. The continued freedom of many areas of Australia from exotic *Aedes* species ensures continuing freedom from dengue for these areas.

[Adapted from *Communicable Disease Intelligence* 25:283-285 Nov.2001]

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ICE NEWS

In 2 years, 7 months and some days the ICE will be upon us. The first postcard announcement has gone out, as an email to attendees of the Brazilian meeting and to AES members, asking them to pass it on to

colleagues overseas in a "virus" like fashion. Some thousands of 'hits' to our web page and 70 odd offers of talks and symposia have arrived so far, but we would welcome feedback about our website.

Finances are reasonable at this stage, with funds secured from the AES, CSIRO, QDNR&M, UQ, and Cotton Research and Development Corporation. There is also substantive support from Brisbane Tourism. The finance committee will now be chasing major sponsorship from the Queensland Government and Industry – this sponsorship is crucial to the success of the Congress as it will enable us to support the Science Program. John La Salle and the Science Program Committee will need our full support in putting flesh on bones in this program. Hopefully we will have a concurrent exposition on Insects at the Museum and we have planned for a "public" session at the Congress, and our Social Committee has made a start in planning events.

Let us all work together to make this the best ICE ever.

Meron ZALUCKI

INVERTEBRATE BIODIVERSITY CONFERENCE

The 5th Invertebrate Biodiversity and Conservation conference held at Adelaide University from December 1-4, 2001, continued the tradition of attracting participants from diverse branches of zoology, featuring symposia focussing on invasive species, molecular tools for conservation, marine invertebrates, invertebrates of the arid zone and ephemeral waters, habitat fragmentation and plant-invertebrate relationships, also legislation and education.

One major and timely change from previous meetings addressing these themes was the lack of emphasis on promoting the use of invertebrates and the focus on the quality of work addressing their use. This probably reflects the hard work of previous meetings and the wider acceptance of the importance of invertebrates in natural systems. That said, there is still probably an overemphasis on describing patterns associated with habitat use (i.e. surveying areas subjected to various land uses) without attempting to address causal mechanisms for any differences, something that reflects the difficulty of undertaking such research. If a meeting of this sort can be deemed to have a backbone it certainly comes from the insect world, with entomological contributions featuring in most symposia. Ants, in particular, successfully invaded many sessions, through spoken papers, posters, and even a movie about "Red crabs and yellow crazy ants". Nevertheless, one of the real values of the meeting is the opportunity to hear of research from different aspects of biology as the commonality of themes in different systems makes light of superficially great disciplinary differences. The coming together of different tribes (terrestrial, marine and freshwater) from different planets (ecologists and systematists) and the increasing contribution from another universe (managers) greatly enhances the value of participating in this meeting. As zoologists focussing on invertebrates are encouraged to put their work in a broader, "useful" context the biennial meeting will become an increasingly important fixture in our calendars

The informal and intimate (despite well over 100 participants) nature of the meeting was enhanced by thoughtfully planned social events punctuating most days. These included a mixer at the South Australian Museum, allowing participants to explore the compelling "A Gap in Nature" exhibition based on the Tim Flannery book and remarkable life-size paintings of extinct fauna by Peter Schouten. The organising committee should be congratulated for their terrific job in running the meeting very smoothly.

The next meeting is tentatively slated for Hobart in 2003, to be held in conjunction with the AES's meeting for that year. If you missed out on the Adelaide meeting the proceedings of the conference will be published in a special issue of the *Supplementary Series of the Records of the South Australian Museum.* You can also pick up copies of the "*The other 99%*", the proceedings of the 1997 conference, from the Royal Zoological Society of NSW for the crazy run-out price of $30, incl. postage and packaging.

Dieter HOCHULI
School of Biological Sciences
University of Sydney
email dieter@bio.usyd.edu.au

CANOPY CONFERENCE

This is the year of the Conference and I am delighted to report that we have well over a hundred papers offered, at least twelve thematic symposia, and a sparkling array of keynote and plenary speakers to educate and stir us up. There will be a range of field trips for the Wednesday as well as longer pre- and post-Conference tours. We will keep Registration open until the last moment and will continue to accept paper proposals (with Abstracts) until late February, when we will start

fitting the jig-saw pieces together to make a coherent Programme.

The Premier of Queensland, Peter Beattie, has agreed to open the Conference, and we expect he will be joined by a senior representative of the Smithsonian Institution as the co-sponsoring body. Symposia range in their themes from 'The Ecology of Mistletoes' to 'Eucalypt Canopies', from 'Pollination in the Canopy' to 'The Economics of Canopy Use' – see our Website: www.premiers.qld.gov.au/about/science/canopyconference

We have the barbecues ready, we have stockpiled the Shiraz, and we look forward to welcoming you all.

Roger KITCHING
Chair, Programme Committee

FASTS

The new President of FASTS, Chris Fell, issued a newsletter shortly after taking over in November. The following points are taken from that circular.

The new Executives first task is to establish an agenda with a new Government and new Ministers. Brendan Nelson as Minister for Education, Science and Training and a member of Cabinet brings a much-needed new perspective to Higher Education. Peter McGauran was an energetic and accessible Minister for Science in the first Howard Government, and his return to that office is welcome. The Opposition is represented by Deputy Leader Jenny Macklin as Shadow Minister for Employment, Education, Training and Science. She will be supported by Senator Kim Carr as Shadow Minister for Science and Research. The President has been in touch will all these people, and also Senator Natasha Stott-Despoja as leader of the Democrats and spokesperson for Science.

Twelve months ago the tide was running our way. The Government was moving to respond to reports from the Chief Scientist and the Innovation Summit, and the Opposition was talking up its intention to re-energise science, research and higher education. It seemed as though election 2001 was going to be a case of "Backing Australia's Ability" versus "Knowledge Nation", with the question of Australia's national investment in these areas the major topic of discussion. We were to be disappointed. These issues were barely discussed in an election dominated by a series of international and domestic crises.

The present situation offers interesting challenges. Australian scientists and technologists have two priceless contributions to make to politicians in Australia - ideas and solutions. Both these qualities are in short supply, and add to the importance of our regular contacts with Parliamentarians at national and regional level.

The university sector remains one of the great unresolved issues in Australian public life. A decline which began 15 years ago is continuing. The pressure on academics to perform more tasks is increasing, as their salary levels are steadily sliding down the ladder on international competitiveness. The quality of infrastructure declines as funding pressures increase. It is time for a national review of the university sector, with genuine discussion on what Australians want from their universities, and how much they are prepared to pay to achieve it.

Fasts also issued the following list:

Ten Top Issues for 2002

1. BRING ON "BACKING AUSTRALIA'S ABILITY": Speed up the new funding promised to science, so scientists can get to work creating new industries and new jobs.
2. INVEST MORE GOVERNMENT FUNDS IN THE UNIVERSITY SECTOR: Australia's national investment in education is slipping behind other countries. We are in danger of losing brainpower and ending up a nation of low-skill, low-pay industries.
3. ENCOURAGE NEW INDUSTRIES TO RELOCATE TO AUSTRALIA: Meet half the cost of employing new PhD graduates, to encourage companies operating in Australia to compete internationally by employing our best and brightest talent.
4. HECS-FREE EMPLOYMENT FOR SCIENCE AND MATHEMATICS TEACHERS: Science and maths teachers are in short supply in Australia, but they still are forced to pay higher HECS fees than teachers in other subjects.
5. BIG SCIENCE: Call for new proposals for Major National Research Facilities each year, to allow "Big Science" proposals to be funded.
6. DON'T DISCOURAGE SCIENCE AND TECHNOLOGY STUDENTS!: Students studying for careers in science, mathematics and technology fields should not have to pay higher course fees than students studying economics, arts, humanities and social sciences.
7. ENCOURAGE COMPANIES TO INVEST IN NEW PRODUCTS: New and better products come from research and development. Companies should be offered financial incentives to invest in more R&D, through a sliding scale of Government support.
8. RESTORE FUNDING FOR CSIRO: CSIRO has lost staff and funding over the last 10 years. Renewed investment will help it carry out important new research for the national good.

9. SCIENCE IN THE NATIONAL INTEREST: Help focus the national Parliament on innovation by establishing a Standing Committee on Science and Innovation, and by providing better high level scientific advice to Parliament.
10. ENCOURAGE SCIENTISTS TO THINK COMMERCIAL: Allow scientists working in publicly funded research organisations like CSIRO to have a stake in their own research, through rewards for successful commercial ventures.

Biological Representatives on FASTS Board:
Aquatic Sciences – Dr Alan Butler (CSIRO)
Biological Sciences – Assoc. Prof. Melissa Little (UQ)
Food & Agricultural Sciences – Ian Longson (Dept. Ag, WA)
Plants & Ecological Sciences – Prof. Snow Barlow (U. of Melb.)

AUTO-MONTAGE

The unique software imaging tool

Some AES members are possibly already familiar with Auto-Montage, if not through personal use, then at least through some of the thrips pictures published in AJE. Version 4.0 is now available and is even faster and more powerful. This system overcomes the depth-of-field limitations of optical microscopes. It provides perfectly focused images regardless of the depth of focus of your optics, and also produces 3D images, depth maps, and measurements. Versatile and easy to use, it is an essential tool for entomologists wishing to capture perfectly focused, high-resolution images of insects, whether with stereo or compound microscopes, providing a digital imaging workstation with image capture, microscope control, and automatic documentation. For further information contact: Medbell Services Pty Ltd; Phone: (08) 8364 3999. Email: Varick_bell@msn.com.au

EXECUTIVE MEETINGS

These were held 13.vi; 27.vii; 24.viii; 13.ix; 26.x; 14.xii.2001. The following are some items of interest:
The Official Secretary has written to advise that the new Governor-General is willing to assume the position of patron of the AES.
The society is registered for GST from 1st July 2001.
President A. Austin represented the AES at the 'Science meets Parliament' meeting held by FASTS. Events such as Science Week provide an opportunity for promotion of entomology. AES members should be encouraged to support and promote entomology by organising activities to coincide with Science Week.
2001 Phil Carne Prize winner is Darrell Kemp.
AES 33rd AGM and Scientific Conference will be held in Fremantle from 22nd -27th September 2002.
250 subscriptions have been received to date. Bill payments were managed so as not to run into deficit in November. 27 people have not paid for 2000 or 2001. They will now be excluded as members. 60 people have not paid for 2001. They will be reminded again and then suspended as members.

New members elected:
Ms Marie YEE, CRC-SPF, Hobart TAS 7001
Mr Greg LEFOE, Research Leader, Invertebrate Pests Program, DNRE KTRI, Frankston VIC,
Ms Sarina PEARCE, Toowong QLD 4066, PhD student,
Ms Linda SEMERARO, IHD Knoxfield VIC, Taxonomy,
Mr Nelson SIMBIKEN, Coffee Research Institute, Kainantu PNG
Ms Amy SNELL, University of Otago, Wellington School of Medicine, NZ (PhD student),
Ms Kay MONTGOMERY, Beaudesert, QLD. Technical Officer QDPI, Fire Ant Control.
Dr S. Adam SLIPINSKI, CIRO Entomology, Canberra ACT.
Dr Sarah MANSFIELD, ACRI, Narrabri NSW. Post-Doctoral Fellow, CSIRO Entomology.
Mr Samuel LOWOR, University of New England, PhD student.
Mr Peyman MEHRPOUIAN (student), East Doncaster VIC 3109.
Dr A. J. CARNEGIE, Res. & Devel. Div., NSW State Forests, BEECROFT NSW 2119

Resignations
B. Conroy, P. Bailey, P. Ferrar, A. Hiller, P. Huber, L. McLeod, I. Oliver, G. Rippon, P. Room, M Tanton

TREASURER'S REPORT

At the end of December 58% of members had taken advantage of the early payment discount for their annual subscription and we thank Bugs for Bugs, Aventis CropScience and Syngenta for continuing as Sustaining Associates of the Society. On the other side of the ledger, 14 members have resigned mostly due to retirement or changing interests but only a couple as a direct result of the subscription fee increase. Excluded are 25 members who have been in arrears for two years. A further 37 members are still in arrears for their 2001 subscriptions despite three reminders; they will no longer receive their publications or enjoy other

privileges of the Society until they are financial. Membership now stands at approximately 650. Of these about 60 students will receive *Myrmecia* electronically through their University and 76 members have chosen to take it that way. That is a "conversion rate" of about 20% that might rise to a quarter by the time that all subscriptions have been paid.

Upon delving into the details of the Blackwell contract for the journal we found that Blackwell has been supplying Myrmecia to their Institutional subscribers. As they were paying all Myrmecia production and mailing costs that had little effect on the Society. However, under the terms of the renewed contract the Society has to meet the costs of producing Myrmecia so Blackwell customers will no longer receive it. If you have been relying on your Institution's copy instead of taking out your own membership, you won't be reading this. However the Executive will welcome enquiries about *Myrmecia* subscriptions from other entomological societies and similar bodies who have a real interest in the private lives of Australian entomologists, as fearlessly reported in Myrmecia.

The ogre of GST with its implementation and quarterly reporting has now been laid to rest, probably costing the Executive no more than an hour a month. However I must remind you that this is an obligatory part of your membership fee that is listed separately for legal reasons. Those of you who are ignoring it should take your protest to the ballot box, not through punishing the Society.

The best way to contain the Society's per capita costs is to have more "capita's". I wish you every success in recruiting more members, as that is what controls your Society's viability.

Ian ENDERSBY

BOOK REVIEWS

Classical Biological Control of Arthropods in Australia. Waterhouse, D.F. & Sands, D.P.A. ACIAR Monograph No. 77, 559 pp. Price $60.00.

Australia has an extensive and proud history of biological control, and has long been one of the leaders in this field. However, it has been over 40 years since the last (and first) comprehensive review of biological control projects in Australia (Wilson, 1960). That covered attempts against 53 arthropod pests of groups of pests and twelve weeds. One indication that the present volume is well overdue is that it covers almost twice as many arthropod pests as were treated by Wilson. [*A review of the biological control of insects and weeds in Australia and Australian New Guinea*. Technical Communication No. 1, Commonwealth Institute of Biological Control, CAB, England. 102 pp.]

This volume is an important contribution to the literature on biological control. It is to be used as a reference work, and it contains little background material or introductory text. Its main aim is to provide ready access to information on biological control attempts against arthropod pests in Australia. This it does admirably. Information is comprehensive, pertinent, and presented in a user-friendly manner. It was written and compiled by two of the main figures in Australian biological control, who have years of experience in the field.

The main part of the volume is a chapter entitled *Details of biological control projects*. This chapter is over 335 pages long, and treats 98 target pests or groups of pests. Each treatment includes a summary, and sections on pest biology, pest status, biological control, in some cases a section on major parasitoid species, and frequently tables. Forty-three tables, generally listing natural enemies, are included in this chapter. These summaries are well written and contain a great deal of basic information. An introductory table is 69 pages long and summarises the information from the above chapter. For each target pest, all introduced natural enemy species are listed. For each species, information is given on host stage attacked, geographical origin, when it was liberated, whether it established, and with what effect. A natural enemy may be included several times in this table if it was released in different areas or at different times. What I particularly like about this table is that each entry is supported by a reference. Although by necessity a lot of "pers. comm."s were used in the table, the vast majority of entries are supported by published references. The authors are to be commended for the amount of work it must have taken to support their table entries in this manner.

The Introduction is short, contains only a minimal amount of background information, and serves mainly to explain decisions and outline conventions to enable the reader to make better use of the book. A final Overview chapter contains tables on exotic species that have been or still are major or minor pests in Australia, and species that are (or may be) native to Australia. Finally, the volume contains 62 pages of references. As mentioned above, the extensive use of references adds great value to the volume for anyone who wants to use it to find out more specific information about the pests or their natural enemies.

Biological control will not diminish in importance in the years to come. As we enter the 21st century there is continued emphasis on managing our environment in a sustainable manner, and biological control is an important component in this effort. This book contains a great deal of practical information for anyone wanting to implement biological control. As the authors put it, "Much can be learnt from the successes (and failures) with classical biological control projects around the world." The information in this book will make it an essential item in the libraries of people engaged in biological control, as well as a variety of other activities. I don't like writing book reviews, and generally do it only when I really want the book. I jumped at the chance to write this review.

John LASALLE

Phasmids of Borneo. By Philip E. Bragg, 772 pp. Natural History Publications (Borneo) Kota Kinabalu, P. O. Box 15291, 88863 Kota Kinabalu, Sabah, Malaysia. Price *ca.* £95 + £10 postage in UK.

Borneo, the third largest island in the world, is still largely unexplored despite its long association with visitors from the Northern Hemisphere. Regardless of the widespread publicity about habitat destruction from logging, oil palm plantations and human settlement, a surprising amount of the island remains relatively "natural". It is thought that approximately 10% of the world stick insect fauna occurs on Borneo. They are largely uncollected because the insects are usually large, take up much room in collections, are difficult to prepare and retain in good condition, and are largely nocturnal. But while stick insects may be largely unstudied by practicing taxonomists, they are extremely popular and many are very well known in another circle. Many dozens of species are avidly kept alive and their life styles enjoyed by pet fanciers in the U. K. and Europe. These people are united by a most successful international society, the Phasmid Study Group. This organisation comprises some 700 members from most countries. Dr Bragg is a prominent member of the group. Through this group's publications and public meetings, they have assembled a vast amount of knowledge on the biology of these insects ranging from general biology and ecology to physiology and conservation.

With a book of almost 800 pages [the book is truly a tome as is weighs almost 3 kg!!] one might assume that this is the last word on Bornean stick insects. But it is really the "first word". With two-thirds of the described species belonging to the Necrosciinae, and the need for further collecting, rearing and comparison of types, this group is in need of further attention. Even with seven trips to Borneo by Bragg, he feels he is just beginning to understand the Necrosciinae. If standards similar to those of the present volume are followed for the Necrosciinae, a book of similar size may result. As Bragg points out, this may be years away as careful rearing and association of the sexes with the proper species and attention to variation, is very time consuming.

The book is arranged using the rather outdated classification of Bradley and Galil. This follows an extensive introduction that will be useful to all biologists working with Bornean fauna. Geography and habitats are discussed and there is extensive coverage of food plants and captive rearing. Thankfully, a section on the biology of the Bornean stick insects is separate from the main body of the text. A section on collecting and preservation offers a basis for discussion. Bragg recommends the careful use of ethyl acetate but notes its tendency to affect colours. This is very true with orthopteroid insects where cyanide is the best killing agent but is difficult to obtain most places. He does not mention it. Instead some different, or even novel methods are suggested. Freezing is suggested, if possible but by simply placing the live specimens in a plastic bag in the sun for 1-15 seconds kills the insects. This can be done almost anywhere. The author discusses a range of preserving methods but the most obvious one, used by many orthopterists and phasmatologists, is not mentioned. This involves gutting the freshly killed specimen and inserting into the body cavity a small amount of boric acid powder and talcum in equal amounts. This combined with quick drying preserves all colours and prevents decomposition.

The author utilises classical descriptive techniques combining them with modern cladistics arriving at his genera arrangements. Hopefully this will lead to a revamped higher classification of the order. The accompanying line drawings are superb and comprise the principal taxonomic structures, habitus poses and eggs. Egg morphology is very important in this group. The book concludes with a history of the Phasmid Database and a full history of all the Bornean taxa. Six appendices contain useful bits ranging from the placement of types in the Leiden Museum to useful collecting equipment.

In this age where economic rationalism has affected the publication of worthy, meritorious large treatises without stipends, it is no co-incidence that the publisher, Mr. C. L. Chan, is himself an avid "phasmatologist". He has provided Bragg and others

the opportunity to study stick insects in Borneo and has borne considerable costs towards the publication of this book. It is not likely to attract a big market because of the nature of the content of the book. However, Mr. Chan has a vast knowledge of Bornean sticks and a large personal collection and considers publication of this book as a 'labor of love'. He is an expert photographer as indicated by the photo on the dust jacket and magnificent colour plates in the body of the book.

The foreword of the *Phasmids of Borneo* written by Datuk Tham Nyip Shen, Deputy Chief Minister of Sabah State, is extremely important. It illustrates the awareness of the Malaysian government in the documentation of their biota. In Malaysia there is no national insect collection. The primary types of the fauna are kept in a variety of places ranging from private collections through universities and institutes. But the majority of types are overseas. This book should demonstrate to the Malaysian government the importance for basic taxonomic research and the need for a facility to house the vouchers of research within the country. With the importance the government is now placing on conservation and bioprospecting, for example, this book may be very timely in achieving these goals.

D.C.F. RENTZ

Bawley Point, NSW

Insect Pests of Agriculture in Papua New Guinea. Part 1. Principles and Practice. Pests of Tree Crops and Stored Products. By Ray Kumar (2001) 723 pp. Published by *Science in New Guinea* at the University of Papua New Guinea, Port Moresby. Price, including packaging and airmail postage, for delivery in Australia is Aust$35, and for delivery anywhere else in the world is US$35. Send orders by email to KM.Kego@upng.ac.pg, by fax to 675-3260369, or by mail to *Science in New Guinea*, Biology Department, P.O.Box 320, University of Papua New Guinea, Port Moresby.PNG.

This giant compilation on agricultural entomology in Papua New Guinea is a landmark in the career of Ray Kumar who has become a familiar figure in tropical applied entomology during almost 40 years working in developing countries around the world. Initially trained to PhD level in Rajasthan, India, he undertook a second PhD at the University of Queensland in the early 1960s and went on to academic positions at professorial level in universities in both Ghana and Nigeria during the 70s and 80s. During this period he published the handbook, *Insect Pest Control, with Special Reference to African Agriculture,* which became a standard and was translated into French. In 1990 he arrived in PNG where he spent until 1996 as Principal Entomologist in the Agriculture Department. Since that time he has been Senior Lecturer, then Associate Professor, in the Biology Department at the University of Papua New Guinea where, besides teaching, he has edited the country's leading journal, *Science in New Guinea*. The present book is a product of his unique background of on-the-ground experience in conducting insect research, training entomologists, disseminating scientific information, and coping with government bureaucracies in many parts of the tropical world. The book itself is A4 size, soft covered, runs to more than 700 pages, and hefts in the hand like a large telephone book. It contains almost as much information. It is liberally illustrated by black and white drawings, some reproduced or redrawn from other texts, but many are refreshing new illustrations drawn by Ray's New Guinean students. It serves as a training manual because it has extensive, and simply written, introductory sections dealing with the general principles of pest control and management, as well as sections on the ordinal classification of insects and techniques for preserving insect specimens. All these sections are extensively referenced to give quick access to the wider literature.

But the real strength of the book is that it comes to grips with the so-called "grey literature". Anyone who has attempted to chase up information on agriculture in Papua New Guinea (or, for that matter, on any other developing country with a colonial past) soon finds that records of earlier pest research and surveys are largely inaccessible. As colonial administrations swelled and expired (Britain, Germany and Australia in PNG's case), and short-term expatriate scientists came and went (many of them there for the adventure rather than the scientific long run), the proper publication of results was often overlooked. Instead, information was relegated to ephemeral growers' leaflets, mimeo-ed screeds, handwritten monthly reports from field stations, annual reports to parliament, drafted but never published manuscripts, or to pages of obscure foreign journals after the expatriate scientist returned "home". This comprises the "grey literature" and much of it disappears into dusty goverment files not available to library services. But, as PNG's senior government entomological bureaucrat for six years Ray took on the challenge of ferreting this information out of those dusty files and it is all summarised and carefully referenced in this book.

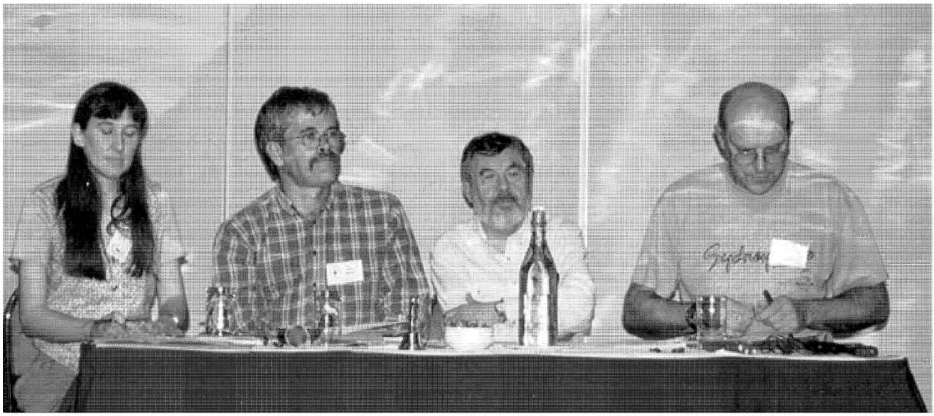
One of the anomalies revealed by the literature

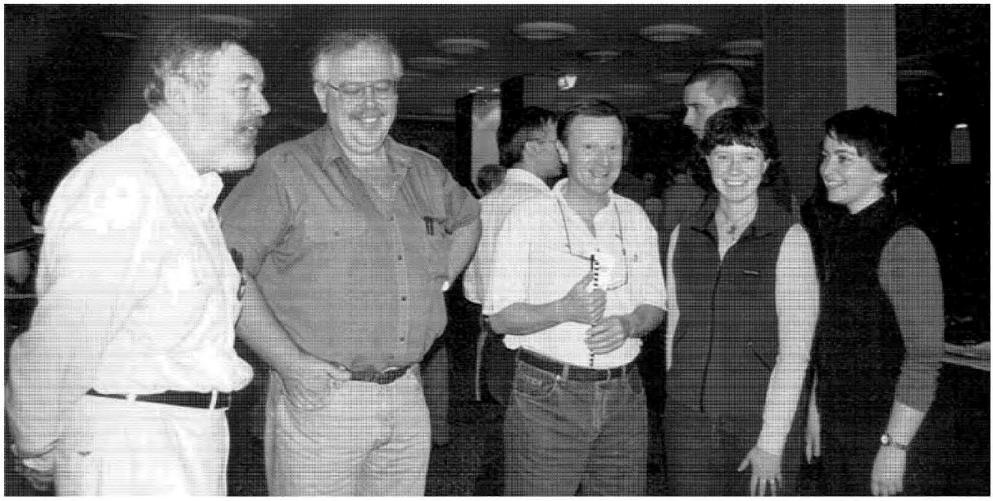
survey is the misleadingly default nature of certain current CD-ROM pest summaries (such as CABI's Crop Pest Compendium), where when a particular pest is recorded from a country it is automatically listed as a pest of all crops in that country that it is known to attack elsewhere. In many instances neither the primary literature nor on-the-ground experience supports many of the listed pest interactions as being relevant to Papua New Guinea. Ray Kumar set the record straight on many of these points.

As its title indicates, the book concentrates on tree crops and stored product pests. Its 130-page summary of pest problems concerning such tropical staples as cocoa, coffee, coconuts, oil palm and rubber give it a cosmopolitan usefulness far beyond the PNG scene. But it also has a 330-page section devoted to a tabulated summary of pest records (including geographic distribution within PNG) and their literature associated with every other crop plant in PNG. This deals with no less than 1593 insect species in 892 genera, 195 families and 17 orders, and covers scores of plants from betel nut and taro to cabbages and rhubarb. Yes, almost a telephone book in scale!

A trite platitude of book reviewers is to urge readers to " add this book to your bookshelf", a terrifying prospect when most books reviewed these days seem to cost upwards of $150 for the slimmest tome. I'd just like to say that if you are interested in tropical pests you should have this 723-page book, and, since it will be airmailed to your door for the princely sum of $35, there is no economic reason why this can't be so.

Geoff MONTEITH
Queensland Museum



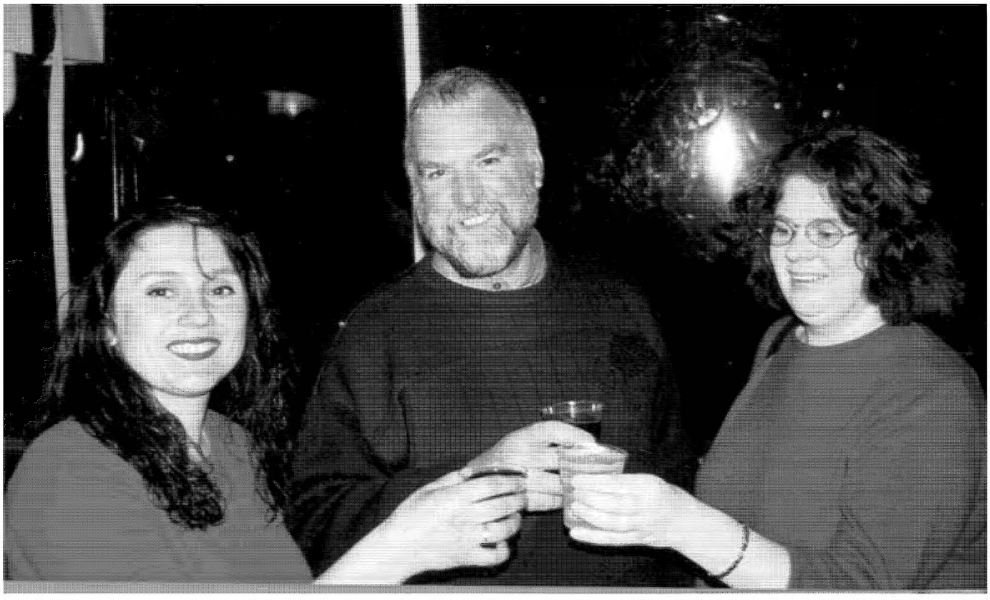


Views from the 32nd AGM and Conference, Sydney

Opposite above: The Executive in session -
Nancy Endersby, Peter Ridland and Ian Endersby listen to Andy Austin
Opposite below: postgraduates 'cruising' - Mark Schutze, Helen Nahrung, Owen Seeman, Andrew McDowell, Claire Baker, Sarina Pearce, Hilton Redgrove,
Petrina Johnson, Luke Rapley, and Mark Wade

Above, top: Kylie Anderson at the phographic competition
Above, lower: Party time for Ian Endersby
with John Jennings, Keith Houston, Claire Stephens and Sylvia Clarke

But I assure you, scale insects are so exciting -
Ting qui Qin with Linda Semeraro and Maree Yee



Victorians find something to celebrate at Sydney -
Violetta Traicevski with Dave Williams and Catherine Mansfield

Christmas lunch at Orange: Zamir Hossain, Geoff Gurr, Leigh Pilkington, Brad McNeil, Peter Gillespie, Murray Fletcher, Col Bower, Merydyn Davison, Michelle Rossetto, Graham Thwaite, Matthew Kerr, Danuta Knihinicki

Entomological Society of NSW lunch at Orange: David McKenzie, Danuta Knihinicki and Alison Nichols

REGIONAL NEWS

AUSTRALIAN CAPITAL TERRITORY

CSIRO Entomology

Jim Cullen, Chief of CSIRO Entomology, attended the first International Symposium on Biological Control of Arthropods in Honolulu in January 2002, where he presented a talk on the life and achievements of **Doug Waterhouse**.

ANIC

As possibly already known to you, the *Butterflies of Australia* by **Michael Braby** won the 2001 Whitley Medal, and the ABRS *Zoological Catalogue of Australia* by **Ted Edwards**, **Judy Newland** and **Leane Regan** received a Whitley commendation as the best Zoological Reference Book.

Max Moulds visited the ANIC Lepidoptera collection in late 2001 to identify his Lord Howe Island material. He was helped by **Ted Edwards** and **Marianne Horak**. Marianne found a new species of olethreutine in the material. Summer brought a migration of Lepidoptera-related visitors to ANIC: **Michael Shaffer**, the former pyralid curator at the BMNH, for 4 weeks to curate our Galleriinae; **Gerhard Tarmann** from Innsbruck, Austria, to complete his book on the Australian zygaenids; **Klaus Sattler** and his wife **Edith**, the former head of Microlepidoptera at the BMNH, for 3 months to add Australian species to his gelechiid catalogue and to further curate our material.

Ted Edwards participated in a NSW National Parks and Wildlife Service Biodiversity survey in Kosciuszko National Park in January 2002.

The first ANIC Beetle Identification course was run in late 2001 and was a great success by independent accounts.

Kim Pullen is the identification and advice officer at CSIRO Entomology and is in the midst of his busiest season of the year. European wasp enquiries are leading the pack as usual this time of year, although plague soldier beetles are putting in a good appearance this year. The most interesting identification Kim did jointly with **John LaSalle**, was an exotic vespid wasp, *Vespa tropica,* that was collected on a boat in Adelaide after it stung a crew member and put him in hospital. Your correspondent hopes to be able to report on the outcome of the ensuing quarantine investigation next issue.

The world of thrips loses one of its brightest stars in February when **David Morris**, our ABRS-funded postdoc, transfers to a truly lousy job – working on Phthiraptera in Illinois with one of North America's outstanding insect systematics research groups. We hope that David will find time to continue his use of molecular methods to investigate the classification of thrips as well as their relationship to lice.

Forest Entomology Group

Saul Cunningham continues to look for links between tissue chemistry of *Toona ciliata* (Australian Red Cedar) and vulnerability to attack by *Hypsipyla robusta* (Cedar Tip Moth). Broad correlations between leaf chemistry and *Hypsipyla* attack have been detected, and we are now beginning to focus more narrowly on which specific compounds are important. With **Martin Steinbauer**'s help, Saul has been using GC-EAD to help narrow the list of relevant volatile chemicals. **Rob Floyd** and **Manon Griffiths** (QFRI) have just returned from travels to *Toona ciliata* plantations in southeast Asia, which form a major part of the *Hypsipyla* research program.

Martin Steinbauer has been continuing his sex pheromone of Autumn gum moth studies with the help of **Tom Bellas** and Swedish colleagues; in particular he has been setting-up a wind tunnel facility and conducting field tests with synthetics. Martin and **Fredrik Östrand** (Lund University) were successful in getting one year's funding from the Royal Physiographic Society, Lund, to fund Fredrik to come to Canberra to further the sex pheromone research. Martin is now busy arranging immigration requirements for Fredrik and trying to secure research funding from cash-strapped plantation companies! Martin is also getting ready for a 3-month visit by **Allan Carroll** (Canadian Forest Service) starting in early February funded by the CRC for Sustainable Production Forestry. Allan and Martin plan to use *in vivo* foliar spectral reflectance to determine whether they can predict which trees female Autumn gum moth will lay eggs on. Allan will also travel to Hobart to see commercial plantation practices. Martin has also began a collaboration with **Pat Backwell** (ANU) to study territoriality/mate defence in relation to reproduction in *Amorbus rubiginosus*. Pat has previously studied such phenomena in fiddler crabs so this could be quite a change for her.

Mark Short has been having discussions with his supervisors, **John Trueman** (ANU), **John La Salle** & **Martin Steinbauer**, concerning behavioural studies of wasp parasitoids of Autumn gum moth usage of flowering plants. In addition, Mark is collaborating with **Mamoru Matsuki** and **Clare McArthur** (CRC Sustainable Production Forestry, Hobart) to study the effects of inter-row

planting of lupins in plantations upon populations of wasp parasitoids.

Termite Research Group

Michael Lenz attended the Termite Workshop in Geneva in November to discuss alternatives for termite management to the use of Persistent Organic Pollutants, organised by United Nations Environment Programme Chemicals. **Dr Christian Bordereau** of the University of Bourgogne, Dijon, France, visited the termite group in Nov./Dec. 2001 to study the trail pheromone of *Mastotermes darwiniensis* in Darwin, Townsville and Canberra.

Stored Grain Research Laboratory

Peter Annis retired from the SGRL in September, but returned after a short vacation, as a post-retirement fellow to do the kinds of science that he'd been wanting to do but couldn't due to the pressures of managing the fumigation group. Peter is working with **Jan van Someren Graver**, **Jonathan Banks**, and other SGRL staff to revise the FAO fumigation manual. Jonathan has also been finalising the Proceedings of the Australian Post Harvest Conference with **Jane Wright**, in between attending meetings around the globe in his capacity as co-chair of the UN's Methyl Bromide Technical Options Committee. Jan has been involved in presenting a number of training courses on fumigation on behalf of AQIS in southeast Asia, the most recent being in Indonesia. Jane attended the National Pest Management Conference and the Methyl Bromide Alternatives Conference in the USA in November, primarily to talk about the new fumigant developed by CSIRO for stored products and to assess the market potential for COS in the USA. **Bruce Halliday** has joined the SGRL to work on stored product mites, but he will continue to honour his commitments in the ANIC as curator of arachnids.

Australian Plague Locust Commission

David Hunter reports that with fewer locusts about at the moment, they have time to catch up on other important things, and in particular, work on progressing *Metarhizium* to registration as a biological insecticide. In consultation with **Richard Milner**, they've completed some trials using the ec formulation of the fungus on wingless grasshoppers in vineyards in WA and SA, with good results. David says he has produced hundreds of pages of the dossier for submission for registration, so the work is progressing well.

AFFA

Ian Naumann moved to the Office of the Chief Plant Protection Officer in AFFA mid last year. He's involved with activities that relate to incursion management (fire ants are a hot topic at the moment!), developing programs to bolster infrastructure (pest database, website for common names, diagnostics) and finally, capacity building programs for the ASEAN region. **Glynn Maynard** is joining the OCPPO from AQIS in Melbourne. We know Glynn moves fast, but she'll really have to, with all the projects they've got lined up for her!

In November, The Emergency Animal Disease Group of AFFA convened a meeting on screwworm fly, primarily to review the recently completed project establishing a screwfly rmass rearing facility in Malaysia, but also to formulate a plan going forward. Local attendees included **Rod Mahon**, who had lead the project in Malaysia for 6 years, **Phil Spradbery**, who had run the previous screwworm fly facility in Port Moresby, **Max Whitten, Jim Cullen** and **Ian Naumann**. International attendees came from Thailand, Indonesia, Malaysia and the Phillippines, the IAEA (Vienna), the FAO and APHIS (Panama -new world screwworm fly program). A possible way forward that was discussed was a multi-species facility that could handle other flies as well – sheep blow fly and perhaps even fruit flies.

Australian National University

Work is in full swing for the revived Entomology course. **John Trueman** and **David Yeates** are keenly awaiting the first laboratory periods to help with the student insect collections. **Bronwyn Campbell** submitted her thesis on pyrethroid resistance in *Helicoverpa armigera* at the beginning of December. **Hannah Reichel** is busy working on her PhD work investigating the molecular phylogeny of ants and **Sophie Dimitriadis** is busy examining the ecology and taphonomy of chironimids in coastal rivers and lakes. **Stuart Dennis** is trying to find money to continue with his PhD work on the role of oestrogenic compounds in population biology and moulting of aquatic insects. **Paul Cooper** is writing a grant to the ARC in the misguided hopes that the ARC will fund any of his work on physiological regulation of gut movement in insects.

ABRS

The folks at ABRS report that they are nearing completion of preparation of six volumes derived from the Zoological Catalogue of Australia database, malacostracan Crustacea (3 volumes),

Heteroptera: Pentatomomorpha, Coleoptera: Buprestoidea and Pisces Part 2. Further contracts are in progress to compile faunal checklists to contribute to the Faunal Master Names List and the AFD web pages. When completed, about two-thirds (~70,000 species) of the estimated described fauna found in Australia and its dependant territories will be databased and available on the web. The ABIF-Fauna: AFD web pages have been updated, and data on Aplacophora, Polyplacophora, Scaphopoda, Cephalopoda, Braconidae and Echinodermata are now available. An upgrade to the Platypus software program, v.3.2.5, may be downloaded and trialed free of charge, see: http:/ /www.environment.gov.au/abrs/abif-fauna.

The ABRS Invertebrate subprogram reports that the cd-rom with the brilliantly illustrated interactive keys "Mites in Soil" is now published and available for purchase through CSIRO Publishing, Melbourne.

In quest of further Lord Howe Island caddisflies, **Alice Wells** spent happy hours over Christmas hiking up and down tracks and climbing cliffs to set and collect lights, pick over rocks in streams (all three of the permanent ones), and sweep riparian vegetation. The two dry biscuits and few raisins offered for Christmas lunch tested the dedication of the accompanying thrips worker, **Laurence Mound**, but definite host plant records for several Lord Howe Island endemics together with several new species assuaged his appetite.

Martin J. STEINBAUER, Jane WRIGHT

NEW SOUTH WALES

NSW Agriculture, Orange Agricultural Institute

A new face working in the collections unit is **Sally Watson.** She is funded by ABRS through the University of Sydney to enter the Australian Auchenorrhyncha (except Cicadoidea) into Platypus for incorporation into the ABIF website. Sally is working under the supervision of **Murray Fletcher** and will be with us until the end of May.

Another happy person is **Brad McNeil** who was successful in gaining promotion to Technical Officer (fruit flies) and will take on the responsibilities of DNA testing of fruit fly larvae as well as a greater supervisory role in our fruit fly monitoring work.

While on leave in Australia's north in August, **Graham Thwaite** called to see **Graham Brown** at the Berrima (Darwin) labs of the NT Department of Primary Industry and Fisheries and the occasion was captured on film (see photo).

The November meeting of the Entomological Society of NSW was held in Orange and hosted by several of the local members. **Graham Thwaite** coordinated the visit, with help from Agricultural Scientific Collections Unit staff **Peter Gillespie** and **Danuta Knihinicki**. Orange turned on a perfect spring weekend for the visitors to enjoy an inspection of the facilities of the Orange Agricultural Institute, an organic apple orchard at Blayney and the new Centre for Organic Agriculture at Bathurst guided by **Gus Campbell**.

The annual Entomologists of Orange Christmas Lunch moved to a new venue in 2001 with 12 people enjoying the delightful setting of the Mountain Tea House on the slopes of Mount Canabolas. Apologies included Agrisearch Services's **Martin Collett** and NSW Agriculture's **Bernie Dominiak**, **Marion Eslick** and **Ann Hateley**. Nice to see **Col Bower** join us from Head Office although we couldn't get him to remove the tie.

John Macdonald has signalled his intention to resign from NSW Agriculture. We wish John well with his future plans and look forward to seeing more of him in Orange rather than travelling around the fruit fly areas of the State.

Murray FLETCHER

CERIT, UNSW

Things are quiet at CERIT for the moment due mainly to staff extending leave from the Christmas/New Year break. Come February, things will start to 'hot up' with everyone back at work and all schedules for insect culturing and testing back in place. Preliminary plans are underway for CERIT's 2002 symposium to be held in September. "Companion Animals" is one topic under consideration, but if anyone has a topic to suggest, please contact: CERIT@unsw.edu.au.

Chris Orton had a busy time at the end of 2001. A UNSW press release about Red Imported Fire Ants instigated several interviews for print and radio media. A segment was also filmed by Don Burke that should go to air in March on 'Burke's Backyard'. Could Chris Orton, who also attended the HIA-PICA termite showcase in December, be in the running for a Logie???

The new Dean for the Faculty of Science has been announced, Professor **Dennis Lincoln**, and CERIT now operates academically out of the new school for "Biological, Earth & Environmental Sciences' (BEES – how appropriate??!!) Our commercial activities remain in Unisearch – Expert Opinion Services.

A new initiative at CERIT during 2001 was the commencement of emailing bulletins of latest entomological and pest control news to interested

persons in the pest control industry, product manufacturers/suppliers and government departments. If you would like to subscribe to the bulletins, that are sent out approximately quarterly, please send your email details to CERIT or phone 02 9385 0344.

Amid the hot weather and bushfires, **Sarah Lunau** produced Imogen in the first days of the New Year. We wish her and husband Scott all the very best adjusting to their new family life.

Recent visitors to CERIT have included: Don Burke & crew; Schering-Plough Animal Health R & D staff.

Julie-Ann SHORT

Elizabeth Macarthur Agricultural Institute - Camden

Grant Herron has spent time writing a new funding application in addition to supervising his current resistance projects at EMAIs Insecticide Resistance Unit. Insecticide Resistance staff have been busy with **Jeaneatte Rophail** recently moving house to be closer to work. **Tanya James** plans to marry in April and **Graeme Gullick** recently turned the big four O.

Garry Levot is now firmly established within the Parasitology Section at EMAI following transfer in May 1998. **Narelle Sales** is expected to return to work part-time in February after 11 months maternity leave following the arrival of daughter Jessee in March 2001. Due to staff resignations and commercial imperatives Garry had to re-acquaint himself with some undergraduate helminth biology while waiting for the Department to recruit an Internal Parasitologist. He was grateful to return to ectoparasite control research full-time. Current projects include: cross-resistance work with dicyclanil, diflubenzuron, cyromazine and diazinon in sheep blowfly; spinosad and ivermectin efficacy studies with sheep lice; environmentally sustainable disposal of spent sheep dip; and, maintenance of therapeutic concentrations of registered sheep dip insecticides. The sheep dip projects are collaborative with **Roger Lund** at the Department's Trangie Research Station and **Robert Black** at Wollongbar.

Tamworth Centre For Crop Improvement

The entomology group at NSW Agriculture in Tamworth welcome **Chris Carr** and **Susan Young**. Chris has just taken up a position as Technical Officer in field crops with **Adrian Nicholas** and Susan (from Imperial College, UK) is back in Australia for more PhD work on piperonyl butoxide with **Robin Gunning**.

In November Robin Gunning visited Pretoria in South Africa for collaborative insecticide resistance research with local entomologists, **Kirsten Kruger** and **Rami Kaffir**, and **Graham Moores** from ICAR-Rothamsted, UK. Robin also attended the Adelaide Invertebrate Biodiversity and Conservation Conference in early December. The conference was absolutely first class.

Emma Cottage has all but finished her PhD thesis on whitefly insecticide resistance and is about to commence post-doctoral studies on cotton aphid resistance mechanisms. Emma's post-doc is funded by the Cotton Research and Development Corporation and supervised by Robin Gunning and Grant Herron.

Robin GUNNING

NORTHERN TERRITORY

Parks & Wildlife Service

An itinerant botanist recently reported some Leichhardt grasshoppers (*Petasida ephippigera*) in a remote backwater of Nitmiluk (Katherine Gorge) National Park. **Colin Wilson** went to investigate. He discovered that the grasshoppers were relatively common. Entomologists willing to scramble up and down cliff faces and scree slopes through dense spinifex in broken sandstone escarpment country in November, miles from the nearest pub, are extremely rare.

Colin was severely embarrassed when a slow-news-day story about a cockroach not seen in Darwin since 1874 went national. He foolishly consented to be photographed up close and personal with a common-or-garden cockroach on his glasses. The media lady helpfully explained that it was all about 'C' words: crocodiles, cyclones....

Northern Australia Quarantine Strategy

Glenn Bellis went on a few one-on-one training trips: to Sydney with **Alan Dyce**, Orange with **Murray Fletcher,** and Brisbane with **John Donaldson**. He also took part in a fruit fly training course aimed at PNG/Indonesian/East Timorese scientists with **Dick Drew**'s crew in Cairns.

Medical Entomology Branch

There have been a few changes in the branch recently. The most significant is the start of extended leave of **Gwenda Hayes,** operations manager, in early December prior to embarking on a new career in another area. Gwenda has been in the branch over ten years and progressed from

base grade technical assistant to the professional position of operations manager.

Gwenda made a tremendous contribution to the branch in all areas, from upgrading and overall organising the reference collection, initiating and developing a fully integrated data base to record and output all programs of the branch, initiating GIS procedures, and implementing well organised larval surveillance and control operations and recording systems. She developed well-presented tables and graphs for annual reporting, and brought intensive branch reports up to a professional standard. She also organised professional presentations for the branch head and trained new recruits in all aspects of medical entomology. She put in 150% all the time, including studying degree courses and undertaking projects that would be direct benefit to the branch operations. Her initiative, dedication and commitment are a tremendous loss to the branch. We all thank her for all her prodigious contribution and wish her every success in the future.

It is a measure of Gwenda's skill, knowledge and hard work that she has been replaced by three people sharing her duties. **Nina Kurucz** is now overseeing routine operations, **Brett Brogan** is looking after public inquiries and development planning comments, while **Gisela Lamche** is looking after exotic vector operations, with all the surveillance and control operations in the various towns in the NT shared out between the above three. Another temporary addition has been **Nancye Turnbull** to input a backlog of data into the database.

Wet season helicopter surveys and salt marsh control operations in the coastal swamps around Darwin results have been very good so far until late January, with low numbers of saltmarsh mosquitoes in the monitoring traps and no complaints from residential areas. The success in reduced numbers is in part from lower January rainfall and in no small part to the field operations organised by Nina, with great efforts by **Jane Carter** and **Allan Warchot** in the field. Jane is also organising GIS recording of the control operations. Nina has also been busy organising the branch annual reports and organising wall presentations for the new health ministers visit to the branch.

Peter Whelan has been pursuing efforts with local environmental health officers and others to drain the large effluent/rain influenced Ilparpa swamp in Alice Springs. Native title has been granted to carry out engineering operations and a drainage culvert has been started. Peter and Nina flew to Alice in January to help with a methoprene pellet mosquito control application of the swamp as an interim measure until drainage is completed. The operation was required after extensive flooding rains and a rise in *Culex annulirostris* mosquito numbers. Over 100 hectares were treated and results to date indicate reduced mosquito problems compared to previous years.

Peter has also been presenting various talks including training for new quarantine officers in Darwin and addressing environmental health officers at a disaster management course in November. He attended the National Arbovirus Advisory Committee meeting in Canberra in November where exotic vector surveillance and national surveillance for Murray Valley encephalitis virus matters were organised.

Gisela Lamche has been appointed as exotic vector entomologist and her duties will include all aspects of surveillance and control of exotic mosquitoes, as well as other operational duties. Gisi has already been in the thick of operations with a risk interception by AQIS of *Aedes albopictus* in Darwin port area where adults had probably flown on shore. The importation was in cargo from Singapore via Timor. Brett and Gisi fogged the port area and Gisi has successfully bred out a batch of adults with larval skins from the intercepted larvae to clarify larval descriptions of this species.

Brett Brogan is handling routine public inquiries and busy reorganising a base line report on biting insects for a projected gas developments project. He has been following up on mosquito problem breeding sites around Darwin in the botanic gardens and new construction sites near the Navy base and Ludmilla sewage station.

Martin SHIVAS

QUEENSLAND – NORTH

James Cook University

Simon Robson attended the 3rd international workshop of ANET (International Network for the Study of Asian Ants), held in Hanoi, Vietnam 3-6 November 2001, at the Institute of Ecology & Biological Resources. **Rudy Kohout** (Queensland Museum) also attended and between the two of them, travelled to a number of high and lowland sites and collected as many *Polyrhachis* ants as possible. A great meeting, next years to be held at the Faculty of Forestry, Kasetsart University, Bangkok, Thailand, November 2003.

QDPI – Entomology

Jack Hasenpusch brought Japanese

entomologist **Kiyotami Fukinuki**, whose interest is in lucanids and dynastines, to see **Ross Storey's** collection. A second caller in January was **Barry Moore,** who was visiting his field station in Julatten. **Paul Zbrowski's** latest effort, 'Green guide to Australian Insects', is nearing publication.

NAQS - Mareeba

During October to January, **Judy Grimshaw's** life was dominated by attendance at meetings and consolidating the results of surveys. Attendance at part of a training course on fruit fly monitoring and identification, which was developed by Dick Drew and funded by ACIAR, in Cairns provided an ideal opportunity to meet up with old friends (and make some new ones) from NAQIA and NARI who were attending the training from Papua New Guinea (see picture).

The detection of suspect red-banded mango caterpillar at Somerset (near the tip of Cape York Peninsula) by QDPI staff in mid October prompted Judy to draw on the expertise of various contacts and establish a PCR identification for larval specimens. With the assistance of **Stefan Krull** in PNG, who supplied adult moth specimens, **Marianne Horak,** and personnel in **John Currans** lab at CSIRO Canberra, this was achieved and proved the identity of the Somerset specimens to be *Deanolis sublimbalis*, the red-banded mango caterpillar.

In November, **Kylie Anderson** returned from a 10 day plant health survey from Cairns to Seisia. The survey was undertaken with the cooperation of the Navy, and the *HMAS Wewak* provided a home-base for the team. Access to 26 islands from the *Wewak* was provided by a Quarantine Vessel, which was towed behind the *Wewak* from Cairns. Some fairly rough water was encountered, the kwells proved invaluable! Upon return to the lab in Mareeba, Kylie almost immediately turned around and flew to Canberra. She attended the much anticipated Coleoptera Identification Workshop, also taking the opportunity to visit ANIC to obtain identifications on survey specimens, and to catch up with various ANIC personnel.

Kylie ANDERSON

QUEENSLAND - SOUTH

Army Malaria Institute

In mid November, **Steve Frances** attended the 50th Annual Conference of the American Society of Tropical Medicine and Hygiene in Atlanta, Georgia, USA, and presented 2 posters on aspects of personal protection measures for mosquito vectors of disease. Following the conference he spent 2 days at the Department of Entomology, Centers for Disease Control, Atlanta. While at CDC, he accompanied **Doug Burkett** on a visit to Atlanta zoo and botanical gardens to check mosquito traps as part of an ongoing survey for the vectors of West Nile Virus. He also visited the Department of Entomology, Walter Reed Army Institute of Research, located in a new building at Silver Spring, Maryland, and discussed future collaborations with **Jeff Ryan**, **Mustapha Debboun** and **Sonya Schleich**.

Professor Gao Qi, from the Malaria Research Division, Jiangsu Institute of Parasitic Diseases, PR China, spent 3 months at AMI working on identification of malaria vectors from 5 provinces in China. In early December, **Nigel Beebe**, from University of Technology, Sydney, visited the unit for a week to work with Prof Gao and **Bob Cooper** on methods to identify Anopheline mosquitoes. **Scott O'Neill** from the University of Queensland also visited to see our facilities and discuss the potential for collaboration. In early December, **Michael Bangs** from the US Navy Medical Research Unit, Jakarta, spent a week in Brisbane before departing for a field trip to Vanuatu.

Steve FRANCES

QIMR

Two students from the Mosquito Control Laboratory at QIMR were recently awarded APAs. **Tessa Knox** completed her Honours in Microbiology at UQ, and **Jason Jeffery** completed honours in Entomology at UQ. Both Tessa and Jason plan on starting their PhDs at QIMR this year. Tessa will be investigating the relationship between various entomological parameters relating to *Aedes aegypti*, and the incidence of dengue infection in humans. Her field work will be conducted in Vietnam and Thailand. Jason will be investigating the role of brackish water mosquito species in Ross River and Barmah Forest virus transmission in south east Queensland. However, at the moment he taking a well earned break from entomology and playing the role of a security guard on the ski fields at Lake Tahoe, California.

Katie Lee, an honours student, recently joined the Mosquito Control Laboratory and will be working on a project at Indooroopilly Island in Brisbane. She will determine whether the presence of flying foxes at the Island is associated with increased risk of Ross River virus transmission in the surrounding areas.

Peter RYAN

Alan Fletcher Research Station
Graham Donnelly has commenced host-specificity testing of the tortoise beetle, *Charidotis auroguttata* (Boheman), a potential biocontrol agent against cat's claw creeper.

Michael DAY

Australian School of Environmental Studies, Griffith University
It has been a hot and entomologically quiet summer at Griffith University. **Roger Kitching** and two dozen undergraduate students have just left for a natural history tour of Brunei. **John Kanowski** and **Heather Proctor** finished off the last of the invertebrate sampling for the Rainforest CRC "Biodiversity values of replanted rainforest" project. Hundreds of thousands of mites and other litter invertebrates are now waiting to be identified. The LucID interactive key to soil mites and other microarthropods "*Mites in Soil*" by **Dave Walter** and Heather Proctor has just been released through CSIRO Publishing. **Frederic Beaulieu**, Ph.D. student supervised by Dave Walter, Heather Proctor, and Roger Kitching, was awarded a prize at the annual Rainforest CRC Conference in Cairns for his poster on microhabitats of mites in rainforest. Fred, Heather, Dave and Professor **Qing-Hai Fan** from Fujian Agricultural University, China, have just returned from a brief field trip to Lamington National Park. Fred succeeded in finding good sites for his research on mite distribution across ecotones, Qing-Hai collected dozens of rare plant mites, and Heather and Dave collected arthropod-associated mites for their ARC project on the evolution of sexual systems in the Mesostigmata. All four acarologists experienced the interesting sensation of being in the middle of a rainforest during a violent thunderstorm, but emerged unscathed barring slight blood loss to leeches.

Heather PROCTOR

SOUTH AUSTRALIA

De Barro Agricultural Consulting
James De Barro has recently completed a three-year research project on lucerne seed wasp. The result of the research was the publication of a booklet titled "Living with the enemy - managing lucerne seed wasp in lucerne seed crops". The booklet is available from RIRDC (ph 02 6272 4539) and the full details of the research can also be obtained from RIRDC on their web site <www.rirdc.gov.au>. The findings may prompt some researchers to contact James at <dbac@lm.net.au> to consider planning an extension of the research in the area of biological control.

5th Invertebrate Biodiversity and Conservation Conference
A very successful conference was held at Adelaide University on 1-4th December 2001 with over 140 delegates, mostly from Australia and New Zealand, but including several from Japan and the UK. Some 74 invited and contributed papers were presented in symposia ranging from the impact of invasive species, habitat fragmentation, to marine invertebrate biodiversity. The conference proceedings are to be published as a special issue of the Records of the SA Museum.

SA Annual Christmas Luncheon
About 20 South Australian AES members attended the annual Christmas get-together at the Queen's Arms Hotel on 6th December. Whilst down in numbers, those attending enjoyed themselves, with some having an impromptu 8-ball competition.

Plant Health Australia Ltd
Peter Allen and Bonny Volgelzang were members of an AusVet Animal Health Services Pty Ltd team that completed a consultancy for Plant Health Australia Ltd on "Options for a consistent national approach to the management of pest and disease risks to Australia's plant industries". The Report reviews the history, current status and key issues with the management of pest and disease incursions threatening plant and livestock industries both in Australia and overseas. Risk analysis is used to provide a framework to identify key threats to plant industries, to assess their levels of risk and then to determine ways, including required capabilities, to manage the risks overseas, at the Australian border and/or post-border. The Report also proposes a national administrative structure involving industry and governments to ensure good communication at all stages of the process and joint responsibility for decisions and funding necessary for effective and prompt management of pest and disease risks and incursions. The Report will be released at the end of April.

John JENNINGS

TASMANIA

University of Tasmania
School of Ag. Science/CRC for Sustainable Production Forestry
Luke Rapley has been finding himself investigating *E. globulus* resistance to the leaf beetle,

Chrysophtharta agricola. This has come about because of the beetle's summer activity in a *Eucalyptus globulus* genetic trial. So Luke's recent weeks have been filled with field surveys of 1000's of trees and oviposition tent trials in order to determine the beetles plant preference! However, when autumn arrives he will return to Autumn Gum moth. **Helen Nahrung** has been monitoring *C. agricola* populations for the final field season of her PhD. Despite the unseasonally cool and wet Tasmanian summer making for soggy fieldwork, she reports that beetle numbers are high in plantations...as are leeches...but at least there are fewer snakes! Fortunately, **Anthony Rice** also reports that it has been a great year for *C. agricola*'s larval parasitoids with both numbers and duration of adults in the field well up on the last two years. His ongoing field-work includes monitoring, phenological studies, and host stage preferences as well as developmental work and host interactions in the lab. Emphasis late in the season will be on the hyperparasitoid *Mesochorus* sp. and interactions with the primary parasitoid *Lixophaga* sp. **Hilton Redgrove** has been setting up behavioural host interaction experiments in the field for his *Heteronyx* leaf beetles in the north-west of the state. **Marie Yee** and **Sue Baker** (School of Zoology) attended the ANIC beetle identification course in December, to aid them in identifying beetle species that are riparian specialists and/or sensitive to forestry. Both also met up with **Richard Leschen** from New Zealand Landcare Research NZ when he visited Tasmania. **Mamoru Matsuki** had a successful trip to the green triangle and SW Western Australia to discuss insect pest monitoring and currently has 2 undergraduate students working with him on his research. **Geoff Allen** has been undertaking some initial surveys of natural enemy abundance in plantations of differing age, as well as trying to look at the impact of spraying on natural enemy numbers and pest populations. **Christine Stone** (NSW Forestry) made a brief visit to the CRC and gave a talk on "The Role of Remote Sensing Technologies in the Management of Native Forest and Plantation Health" in mid January.

School of Geography and Environmental Studies

Cathy Young's PhD research on the "Biosystematics and Ecological Aspects of Southern Australian Ennomine Geometrid Moths" is progressing well. On the molecular side she has 28S D2 sequences from over 60 different species and is in the process of analysing them together with European species in order to provide a phylogeny of Ennominae and related sub-families. Her fieldwork has involved the collection, rearing, description, drawing and photographing of approximately 140 Australian Ennomines and related sub-families, which is now complete.

Forestry Tasmania

Jane Elek also reports that is has been a terrific summer in Tasmania for insects – but unfortunately that includes the pest species. Jane has been very busy managing leaf beetle defoliation in FT's eucalypt plantations, and has been able to trial some biological insecticides such as Bt and spinosad. She's hoping the trials might help persuade the relevant companies to register them for forestry use.

Simon Grove and **Dick Bashford** are reorganising the FT insect collection. It is already a very valuable resource, but currently material from different projects is stored separately, and over the years, many species have acquired multiple morphotype code-names, one for each project from which vouchers were derived. Simon and Dick intend to integrate the collection along taxonomic lines, and to database it, to enhance its value for future forestry-related research projects. They would like to emphasise that the collection is not just for in-house projects, and are keen to see it become a central repository for Tasmanian vouchers collected in the course of forestry-related projects conducted by other researchers/institutions too. If that's you, please contact Simon or Dick.

Visitors to FT have included **Robert Raven** and **Barbara Baehr** from the Queensland Museum who were funded to spend a week in November at the Warra LTER site in southern Tasmania to collect spiders from habitats not already surveyed. **Lisa Boutin** (Queen Victoria Museum) joined them to collect live specimens for study. **Peter Hibbs** (Smithsonian Institute, Washington) successfully visited Tasmania for ten days in January mainly at Cradle Mountain National Park and Warra collecting rhagonid flies for a systematic review. **Richard Leschen** (Landcare Research, NZ) visited Tasmanian collections and Warra looking for *Arhopalus* (cerambycid) specimens, cucujids, and Coleoptera associated with fungi.

Gunns Limited

Tim Hingston and **David de Little** have been doing collaborative work with **Trevor Birley** and **Bill Dixon** of Bayer on the use of Confidor pills

against *Heteronyx crinitus* and *H. dimidiata* attacking *Eucalyptus nitens* seedlings. The season has been cool and wet but there has been quite a lot of *Heteronyx* activity so they have good expectations from the trial. They have also experimented with various physical barriers including the mesh stockings used successfully against African Black Beetle attacking *Eucalyptus globulus* in Western Australia. Gunns has been undertaking insect monitoring in its eucalypt plantations since last October and the main insect problems have been *Chrysophtharta agricola, C. bimaculata, Uraba lugens* and *Eriococcus confusus*. David is also looking forward to a visit to Burnie in early February by **Mauro Daccordi** and **PierMauro Giachino** of the Regional Museum of Natural History, Turin, Italy. Mauro is collecting Chrysomelidae, and PierMauro, Carabidae and Cholevinae.

Department of Primary Industries, Water and Environment

Owen Seeman has been doing a survey of invertebrates associated with cherries, and nothing especially surprising has come from this at this point. **Lionel Hill** continues with his *Plutella* project. Owen and Lionel have done preliminary surveys for fireants, as required by the national program for their eradication. **Richard Leschen** (Manaaki Whenua Research Station) visited the DPIWE collection looking for *Arhopalus* beetles – and also taking the opportunity to look at our Cryptophagidae and Nitidulidae. Finally the end has arrived and Owen reports that his PhD thesis returned from the examiners a couple days before Christmas, and is accepted with minor revision!

Geoff R. ALLEN

VICTORIA

Institute of Sustainable Irrigated Agriculture, Natural Resources and Environment

David Williams and **Alex Il'ichev** visited North America in July. They visited Canada, Washington State and Michigan to discuss pheromone work with **Jay Brunner** (Washington), also **Mark Whalon** and **Larry Gut** (Michigan State University), and the 3M company (Canada). The trip resulted in a collaborative project on mating disruption of oriental fruit moth and codling moth. They also developed an MOU between NRE and MSU for a wide range of collaboration. David and Alex took the opportunity to finalise details of chapters they are contributing to a book on IPM being produced by MSU. David later went on to meet with **Hugh Fraser** in Canada. Hugh had visited David earlier in the year and works closely with **Graeme Murphy** (ex NRE entomologist now working in Ontario). Graeme was not available because he was on vacation at a cabin he part owns with Hugh in the "wilderness".

After meeting at headquarters of 3M Canada in London, Ontario, Alex continued his trip to Sweden. He visited Chemical Ecology laboratory (**Peter Witzgall**) at the Swedish University of Agricultural Sciences, Alnarp, where Alex delivered a seminar about area-wide mating disruption projects and pheromone based IPM investigations in Victoria. Alex also visited orchards under mating disruption in southern Sweden and participated in field and laboratory experiments with Peter Witzgall.

On return to Australia David had just over a day to reacquaint himself with his family before heading off to Tasmania to discuss IFP and IPM at the Stone Fruit conference. Then a couple of weeks later he headed off to Queensland for the Apple and Pear conference. David presented a paper on IFP at the Fresh 2001 conference in September and caught up with **Andrew Beattie** and **Rob Spooner-Hart** at the HAL presentation of the Graeme Gregory Award to Andrew. Congratulations to Andrew for a well deserved award. Not long after that David set flight again to Sydney for the AES conference and a meeting with ex NSW Agriculture entomologist **Vic Edge** who now works as a consultant for HAL.

Mark Whalon from MSU had a three-day stop over at Tatura for discussions with David, Alex Il'ichev and **Mofakhar Hossain**. In July 2001, Mofakhar returned from a 6 weeks study tour to Bangladesh, Israel, Norway and USA. He made presentations in all four countries about the achievements in the field of "Attract and Kill" strategy to control *Carpophilus* beetles. These presentations generated lots of interest among the scientists and increased international awareness of NRE's sustainable IPM programs in orchards and its leadership in pheromone based research. During his visit to USDA, Peoria, IL and USDA, Fresno, CA, Mofakhar identified areas for potential collaboration between USDA and NRE - Tatura. During his visit in USA he also attended the 85th Annual meeting, Pacific Branch Entomological Society of America (June 24 - 27) and the Fifth International Peach Symposium (July 8 - 11). He presented papers at both meetings. Mofakhar used these meetings to become more aware of current research trends in USA and other parts of the world, and also to establish new contacts for further collaboration.

As this item is being prepared David Williams is waiting on the arrival of several international visitors. **Paul Pernter** is an apple advisor specialising in IFP in the South Tyrol area of Italy. He will be on exchange with David for 3 weeks. **Alan Knight** from Washington is visiting **Graham Thwaite** in January and will meet with David at Tatura at the end of the month before going on to SA. **Doug Landis** from MSU is visiting Victoria as part of the NRE Enhancing Science Networks program in February. Larry Gut from MSU will arrive mid-February for 3 weeks to work with Alex Il'ichev and David in the mating disruption project.

Institute for Horticultural Development, Natural Resources and Environment

Mali Malipatil was in India recently after having had the honour conferred on him delivering the 4th Dr S. Pradhan Memorial Lecture at the Indian Agricultural Research Institute, New Delhi. This annual Lecture was established by IARI, the premier agricultural research institution in India, and the Entomological Society of India in memory of Dr S. Pradhan a scientist par excellence, an international authority on insect ecology, toxicology and IPM, a visionary and a philosopher. Mali presented this formal lecture on the 20th December 2001 on the Importance of Systematics to Biological Control and Bio-Security. For Mali this was a memorable occasion having had the opportunity of going back to his alma mater after nearly 32 years! The IARI is where he commenced his career in systematic entomology by completing his Master' degree on the taxonomy of Indian lygaeid bugs before moving to University of Queensland to work with the late **Tom Woodward** on the Australian fauna. Besides visiting and spending time with his family and relatives, he worked in the collections held at IARI and at the Project Directorate of Biological Control (formerly Commonwealth Institute of biological Control, Indian Station) in Bangalore, in consultation with the taxonomists based there.

Mali has a word of advice to those taxonomists intending to work on the Oriental (Indian subcontinent) fauna. The collections at IARI and the Zoological Survey of India (Calcutta) contain a substantial amount of historic and type material that was considered in the classical works such as the Fauna of British India. Although parts of these collections are poorly maintained and curated, it is essential that this material is borrowed and studied before a comprehensive coverage of the fauna of these regions is achieved. If you have had problems in the past receiving response to your requests for loans, please persist and don't give up! Please contact Mali if he can assist in facilitating contacts with taxonomists in those collections.

Peter Ridland and **Nancy Endersby** have been kept very busy with the local organisation of the Fourth International Workshop on the Management of Diamondback Moth and Other Crucifer Pests. The highly successful Workshop was held at the University of Melbourne in the last week of November 2001. For four days 93 delegates from 23 countries gathered to share information of research in their parts of the world. **Greg Baker** (SARDI) and **Mike Keller** (Adelaide University) put together an excellent scientific program. The eight invited speakers were **Tony Shelton** (Cornell University, USA), **A Sivapragasam** (MARDI, Malaysia), **Tom Sparks** (Dow, USA), **Stan Finch** (HRI Wellesbourne, UK), **Liu Shu-Sheng** (Zheijang University, China), **Mike Keller** (Adelaide University), **Ary Hoffmann** (CESAR, La Trobe University) and **David Heckel** (CESAR, University of Melbourne). After the Workshop, **Soedarwohadi Sastrosiswojo** (Reseach Institute Vegetables, Lembang, Indonesia) and Stan Finch spent several days with Peter, who kept them hard at work giving seminars on their work at IHD Knoxfield and at Keith Turnbull Research Institute, Frankston.

Keith Turnbull Research Institute, Natural Resources and Environment

Greg Lefoe (KTRI) visited **Don Dahlsten** at UC-Berkeley in late October, 2001. More than 15,000 over-wintering elm leaf beetles were collected and shipped to KTRI where they are being maintained until emergence of the tachinid *Erynniopsis antennata*. While in California, Greg travelled to San Luis Obispo with **Dave Rowney** (UC-Berkeley) and took part in a release of *Psyllaephagus bliteus*, a potential biological control for the red gum lerp psyllid *Glycaspis brimblecombei*

Genetics Department, University of Melbourne

Kimio Hirabayashi from Applied Biology, Shinshu University, Japan visited **Jon Martin** in November/ December to look at ways of using molecular techniques in his studies of the ecology of Chironomidae.

Cathy MANSFIELD

Entomological Society of Victoria

Tim New spoke to our October meeting about the development of the national action plan for Australian butterflies and this raised numerous

questions about where conservation dollars should be spent. There were advocates for the promotion of flagship species to raise awareness, but one dissenter who favoured a triage approach to fund only those cases with a high probability of success. December is traditionally Member's night and it was very visual, with a video of butterflies made by **Kelvyn Dunn** during a trip to Malaysia and **Daniel Dobrosak's** first digital camera and computer projection effort showing specimens taken during a Society excursion to a reserve in Ocean Grove. It was disappointing that there were no nominations for the Society's Le Soeüf Award this year. The award recognises excellent contributions by amateur entomologists but nominations have been declining over recent years. It is not clear whether this is due to poor promulgation or whether worthy amateurs no longer exist.

Our newsletter continues to be dominated by butterfly articles mostly concerning interstate observations but there was also a record of some arboreal carabid beetles and the text from Presidential address for this year which described insects from **Allan Kellehear's** local area.

Ian ENDERSBY

PAPUA NEW GUINEA

Science in New Guinea has announced the publication of: **Kumar, R**. *Insect pests of Agriculture in Papua New Guinea*. Part I. Principles and Practice. Pests of tree crops and stored products. xvii + 723 pp., 138 illustrations.

This book provides an up to date treatment of the principles and practice of insect pest management in relation to PNG. The major insect pests of cocoa, coconut palm, oil palm, betel nut, sago, rubber, coffee, tea, cinchona and stored products are described, illustrated and their management strategies discussed. The book also contains a 349-page catalogue of the insect species recorded in the PNG agro-ecosystems. The publication will thus also interest researchers in faunistics and agro-biodiversity. Orders: Office of Science in New Guinea: Phone: (675) 3267396/630/210; Fax: (675) 3260 369; email: KM.Kego@upng.ac.pg). Price (including airmail): Australasia: AUD35; Rest of the World: US$35).

R. KUMAR

Overseas Correspondent

NOTICES

International IPM Conference: Exploring New Frontiers in Integrated Pest Management
Toronto, Canada. March 24 to 26, 2002
Contact: Margaret Appleby, IPM Systems Specialist, OMAFRA, 95 Dundas St., R.R.#3 Brighton ON, Canada K0K 1H0,
Tel: 613-475-5850 Fax: 613-475-3835
<Margaret.Appleby@omafra.gov.on.ca><http://www.gov.on.ca/OMAFRA/ipmconference/>

6th International Symposium on Fruit Flies of Economic Importance
6 - 10 May 2002. Stellenbosch, South Africa. Further information: Eugene Booysen, Cape AgriTours e-mail: agritour@adept.co.za

3rd International Forest Canopy Conference
Cairns International Hotel, Queensland,
23 - 28 June 2002
http://www.premiers.qld.gov.au/about/science/canopyconference/

2nd International Congress on Phthiraptera
8-12 July 2002, University of Queensland, Brisbane. See: www.imb.uq.edu.au/ICP2

5th International Congress of Dipterology
September 30 – October 5, 2002
University of Queensland, Brisbane
The International Congress of Dipterology will bring together 300 researchers from a broad range of disciplines to discuss the latest research on Diptera (true flies). The Program will be designed to provide a unique environment in which to discuss current research. Themes will include: Morphology, Physiology and Ultrastructure; Biodiversity and Conservation; Agricultural Diptera; Behaviour and Ecology; Medical, Veterinary and Forensic Diptera; Systematics and Phylogeny; Genetics and Genomics; Collections and Databases
Please see our web site at http://www.uq.edu.au/entomology/dipterol/diptconf.html
ICD5 Congress Secretariat, Conference Connections, PO Box 108, Kenmore, Queensland, Australia 4069; Fax (61 7) 3201 2809; email <sally.brown@uq.net.au>

A.E.S. PHIL CARNE PRIZE

The Executive takes pleasure in announcing The Australian Entomological Society's Phil Carne Prize. This prize honours contributions made by Dr Phil Carne to the science of entomology and to The Australian Entomological Society, and is intended to foster high-quality entomological research among young scientists. The prize is open to any undergraduate or postgraduate who has submitted a paper to the **Australian Journal of Entomology** and had it accepted for publication within the last year. Entrants may be enrolled full or part-time, and are not required to be members of The Australian Entomological Society. Entries will be reviewed by the normal Journal referring process. The Chief Editor will advise the Executive of the eligible papers and these will be presented to a selection committee appointed and convened by the Vice-President of the Society.

The winner will be invited to present the winning paper at the Society's Annual General Meeting and Scientific Conference. The prize will be $300 plus free conference registration, accommodation, return airfare to the Annual Conference and presentation of a scroll.

Manuscripts and other editorial correspondence should be addressed to Dr Peter Allsopp, Chief Editor, Bureau of Sugar Experiment Stations, Private Bag 4, Bundaberg DC 4670, Australia.

Technical Training Course ANIC, Canberra

Staff of the Australian National Insect Collection provide a training course for entomological technicians working with research collections of insects and related organisms for taxonomic study and identification. This course is designed to teach participants how to collect, prepare and curate entomological material to a stage ready for identification. The course comprises a series of demonstrations on these aspects as they relate to the major orders of insects and related arthropods. Specimen identification is not covered in the course. All demonstrations are conducted by ANIC staff expert in the area of concern. The next course will be held 23 - 27 September 2002, at the CSIRO Entomology Black Mountain Laboratories, Clunies Ross St, Acton, ACT 2601.

For more information contact Graham Crompton, ANIC Manager
Phone: (02) 6246 4036
Fax: (02) 6246 4264
Email: graham.crompton@ento.csiro.au
http://www.ento.csiro.au/products/products.html#training

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY INC.
NOMINATION FOR MEMBERSHIP

Please return to: Ms Nancy Endersby, AES Secretary, c/o Institute for Horticultural Development, Private Bag 15, Ferntree Gully Delivery Centre VIC 3156 AUSTRALIA

We, the undersigned

Proposer .....
(print name) (signature)

Seconder .....
(print name) (signature)
being financial members of the Society, propose the following for membership of the Australian Entomological Society Inc.

Title.....Initials.....Given name.....Family name.....

of (Address) .....

.....Post Code.....

Tel. .....Fax .....

E-mail ..... Degrees, etc. .....

Interests, experience and publications in entomology for publication in the News Bulletin *Myrmecia* (please attach brief resumé) .....

I accept nomination and undertake, if elected, to abide by the rules of the Society and to pay annual subscriptions by the date prescribed.

Signature ..... **Date** .....

For **2002**: Annual subscription $93.50; full-time student or retired members $46.75 (incl. GST)
New members receive a first year rebate of $5.00 (pay $88.50) and students $2.50 (pay $44.25).
Students please attach proof of full-time student status
Payment in Australian dollars is required with nomination and may be made by MONEY ORDER, CHEQUE (made payable to Australian Entomological Society Inc.) or CREDIT CARD

Bankcard Visa Mastercard

Cardholder Name _____
Number _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ Expiry date _ _/_ _

Signature _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ I require a receipt YES/ NO